

WHAT IS CLAIMED IS:

1. A handle structure adapted to secure a case in a frame of an electrical apparatus, wherein said frame comprises a protruding portion extending from said frame, comprising:

at least a handle, wherein each of said handles comprises:

a stem portion;

an engaging portion pivotally connected to said case and further comprising a recess portion for engagement with said protruding portion of said frame; and

a leaf spring structure being set at the other end of said stem portion for securing said case in said frame, wherein said handle is engaged with said case and said case is engaged with said frame when said case is secured in said frame, and said leaf spring structure is used for disengaging said handle from said case when said case is retracted from said frame.

2. The handle structure according to claim 1, wherein said leaf spring structure comprises:

a connecting portion for connecting to said stem portion;

a first protruding portion for locking said case with said handle;

a pressing portion connected to said first protruding portion for receiving a pressure;

a backside piece connected to said pressing portion and covering said connecting portion; and

two side pieces separately connected to two sides of said backside piece and folded to be parallel to each other and form two smooth sides.

3. The handle structure according to claim 1, wherein said frame is a frame of a power supply apparatus.

4. The handle structure according to claim 1, wherein said stem portion is a thin plate.

5. The handle structure according to claim 1, wherein said case is a case of a power supply.

6. The handle structure according to claim 1, wherein said handles are symmetrically set at two sides of said case for being grips when said case is engaged and disengaged with said frame.

7. The handle structure according to claim 2, wherein said leaf spring structure including said connecting porting, said first protruding portion, said pressing portion, said backside piece, and said two side pieces is integrally formed.

8. The handle structure according to claim 2, wherein said connecting portion is connected to said stem portion through a connecting element.

9. The handle structure according to claim 2, wherein said first protruding portion is a flexible structure.

10. The handle structure according to claim 2, wherein said pressing portion is formed by folding a linking portion located between said backside piece and said first protruding portion.

11. The handle structure according to claim 2, wherein said pressing portion has an arc side cross-section.

12. The handle structure according to claim 1 or 2, wherein said case further comprises an opening on its surface.

13. The handle structure according to claim 12, wherein said opening is engaged with said first protruding portion when said handle is engaged with said case.

14. The handle structure according to claim 12, wherein said opening further

comprises a first fixing portion and said first protruding portion further comprises a second fixing portion so that said first fixing portion and said second fixing portion are locked to each other after said first protruding portion enters said opening of said case.

15. The handle structure according to claim 14, wherein said first protruding portion is proceeded with compression when said pressing portion suffers said pressure so as to move said backside piece and said two side pieces along a direction of said pressure and relieve engagement between said first fixing portion and said second fixing portion.

16. A handle structure for engaging and disengaging a first object and a second object, wherein said first object comprises a surface and said second object comprises a protruding portion, comprising:

- a stem portion;

- an engaging portion pivotally connected to said first object and further and further comprising a recess portion for engagement with said protruding portion of said second object; and

- a leaf spring structure being set at the other end of said stem portion for securing said first object in said second object, wherein said handle is engaged with said first object and said first object is engaged with said second object when said first object is secured in said second object, and said leaf spring structure is used for disengaging said handle from said first object when said first object is retracted from said second object.

17. The handle structure according to claim 16, wherein said leaf spring structure comprises:

- a connecting portion for connecting to said stem portion;

- a first protruding portion for locking said first object with said handle;

a pressing portion connected to said first protruding portion for receiving a pressure;

a backside piece connected to said pressing portion and covering said connecting porting; and

two side pieces separately connected to two sides of said backside piece and folded to be parallel to each other and form two smooth sides.